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ABSTRACT

Industrial arts programs, courses organized for the development of understandings about the technical, consumer, occupational, recreational, managerial, social, historical, and cultural aspects of industry and technology, are an important area of education. Industrial arts education develops individuals in terms of general education objectives, requires abstract reasoning in practical situations resulting in greater understanding of the content area, and contributes toward the understanding of and preparation for participation in the world of work. Programs are designed to provide opportunities for practical experience, exposure to a variety of jobs and careers, personal development, and career guidance. Such education provides both boys and girls with a means of expression through the use of tools, materials, and processes. It consists of: (1) integrated technological problem-solving activities in the elementary grades; (2) exploratory experiences for middle/junior high school students; and (3) exploratory or concentrated experiences for senior high school students, depending on the learner's background. In adult education, industrial arts provides a means of acquiring new skills or improving work related skills. For special education students, valuable hands-on learning experiences are offered in the on-going program or in specifically tailored courses. Industrial arts youth organizations are an integral part of the instruction program. (Author/MS)

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POSITION PAPER ON INDUSTRIAL ARTS EDUCATION IN NEW JERSEY

State of New Jersey
Department of Education
Division of Vocational Education
225 West State Street
Trenton, New Jersey 08625

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Stephen Poliacik
Assistant Commissioner of Education

William Wenzel
Deputy Assistant Commissioner of Education

John H. Koenig
Associate State Director of Instructional Services

Ellis R. Thomas
Director of the Bureau of Vocational-Technical
Program Services

Richard P. Callan
Director of Industrial Arts Education

William R. Smith
Supervisor of Industrial Arts Education

Fred W. Puhlfuerst
Supervisor of Industrial Arts Education

PHILOSOPHY OF INDUSTRIAL ARTS IN NEW JERSEY

Industrial arts is an important area of education which contributes to the complete development of all youth. Industrial arts programs are those education programs which pertain to the body of subject matter or courses organized for the development of understandings about the technical, consumer, occupational, recreational, organizational, managerial, social, historical, and cultural aspects of industry and technology. Included are learning experiences involving activities such as experimenting, designing, constructing, evaluating, and using tools, machines, materials, and processes which provide opportunities for creativity and problem solving.

Industrial arts education recognizes the various influences which the industrial and technological aspects of our culture exert upon individuals and groups and recognizes the inter-relationships between the development of industry, technology, and the development of civilization.

In addition to developing individuals in terms of general education objectives, industrial arts education serves a unique role. Much of its content requires the use of abstract reasoning in practical situations. This process leads to a greater understanding of the content which is unique to industrial arts education and reinforces and enhances understandings in related fields. Illustrative of the fields to which industrial arts contributes heavily are: engineering, chemistry, physics, vocational education, mathematics, social science, and business. Industrial arts education, as a part of general education, deals with facts, understandings, and appreciation which all persons living in an industrial society should possess. As a part of vocational and career education, it contributes significantly toward the understanding of and preparation for participation in the world of work.

GOALS OF INDUSTRIAL ARTS EDUCATION

A coordinated and comprehensive industrial arts curriculum makes important contributions to the total educational development of the individual. Programs are designed to:

1. Provide laboratory experiences which will enable students to work safely with a wide variety of tools, materials, processes and products related to present and future industrial practices and trends.

2. Provide occupational information and instruction pertaining to a broad range of occupations, including working conditions, training requisites, salaries or wages, advancement opportunities, work attitudes, personnel structures and safety.

3. Provide opportunities to acquaint students with a wide variety of jobs and careers in business and industry to assist them in the making of informed and meaningful occupational choices.

4. Provide students with information and experiences that will assist in preparing them for enrollment in advanced or highly skilled vocational and technical programs.

5. Provide opportunities for students to develop an appreciation of design and workmanship and the ability to select, care for, and use industrial products as an aware consumer.

6. Provide students with the basic fundamentals for the development of:

   a. Desirable attitudes and practices with respect to the health and safety of self and others.

   b. Sound habits of self-reliance and resourcefulness in meeting practical situations and providing experiences for worthy leisure-time activities.

INDUSTRIAL ARTS IS FOR ALL YOUTH

Industrial arts education is rich with learning activities for all youth, both boys and girls. It provides a wholesome outlet of their desire to express themselves through the use of tools, materials and processes. Individuals who develop interest in industrial arts activities tend to become motivated to greater achievements in other school subjects by realistically applying the valuable related technical content to reinforce and extend other academic proficiencies.

INDUSTRIAL ARTS IN THE ELEMENTARY SCHOOL

Industrial arts education in the elementary grades consists of basic industrial technological problem-solving activities which are an essential part of the common learning experiences of all elementary school children. It enhances the child's personal development by contributing to a clearer understanding of and his relationship to the technological environment. Activities should be integrated with the basic units of elementary education so that the results will lead to a systematic understanding of industry and assist in making the learning of abstract concepts more meaningful through the use of tools, materials, and processes.

INDUSTRIAL ARTS IN THE MIDDLE/JUNIOR HIGH SCHOOL

At the middle/junior high school level, industrial arts is a vital part of the total educational program. It provides students with exploratory experiences in the technological careers of our culture. These experiences help the individual discover and develop occupational interests and aptitudes.

Industrial arts should be made available to all middle or junior high school students. Exploratory experiences are provided in such areas as, construction, manufacturing, transportation and communications, to include activities in, but not limited to: woodworking, metalworking, drafting, graphic arts, electricity, and power. The content is horizontal in nature with emphasis on a broad variety of experiences chosen from aspects of industry. The individual is introduced to the basic tools, materials, machines, processes, and organizations of industry.

INDUSTRIAL ARTS IN THE SENIOR HIGH SCHOOL

The senior high school program has exploratory value for learners who lack industrial arts experience. Those with previous industrial arts experiences may begin to concentrate in a given area, such as electricity-electronics, architectural drafting, power mechanics, or graphic communications. At this point, work standards may approach those of industry. Learners are given considerable depth in a field of their choice which provides for greater insight into occupational careers. The skills and knowledge acquired may be used vocationally, avocationally, and in helping to solve consumer problems. The industrial arts program also makes valuable contributions to the college-bound student. For many of these students, this will be their only first-hand experience with the industrial aspects of our culture prior to making a career choice.

INDUSTRIAL ARTS IN ADULT EDUCATION

Industrial arts at the adult level is designed to meet the unique needs of those young people and adults who are no longer enrolled in full-time public education. These needs are usually related to the individuals desire to acquire new skills for personal development, family living, economic competency, skill training and re-training, leisure time activities and citizenship.

Another important contribution of industrial arts to adult education is to assist in improving work related skills. The individual may explore new occupational fields or update present skills and knowledge in light of contiruing technological advances.

INDUSTRIAL ARTS IN SPECIAL EDUCATION

Industrial arts offers valuable educational experiences to all students regardless of the specific ability level of the learner. Students with special needs should be given the opportunity to participate in industrial arts activities at all grade levels.

Whenever possible, students should be permitted to enroll in the on-going industrial arts program. If circumstances do not permit this, additional courses tailored to the particular needs of the students should be designed to allow the student to realize his or her full potential through hands-on industrial arts experiences.

INDUSTRIAL ARTS YOUTH ORGANIZATIONS

Industrial arts programs may provide for students to participate in youth organization activities as an integral part of the instruction offered. Youth organization activities will be supervised and directed by qualified industrial arts personnel.